

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/063659 A1

(51) International Patent Classification⁷:
2/66, 5/333, 7/04, 2/66, 5/333

C07C 7/04,

(74) Agents: **DE GREGORI, Antonella** et al.; Ing. Barzano' & Zanardo Milano S.p.A., Via Borgonuovo, 10, I-20121 Milan (IT).

(21) International Application Number:

PCT/EP2004/014166

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date:

13 December 2004 (13.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

MI2003A002551

22 December 2003 (22.12.2003) IT

(71) Applicant (for all designated States except US): **POLIMERI EUROPA S.p.A.** [IT/IT]; Via E. Fermi 4, I-72100 Brindisi (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GALEOTTI, Armando** [IT/IT]; Via Staffola 12, I-46023 Gonzaga-Mantova (IT). **BENCINI, Elena** [IT/IT]; Via Cisa 86/T, I-46030 Virgilio-Mantova (IT). **TRENTINI, Leonardo** [IT/IT]; Viale della Repubblica 23, I-46100 Mantova (IT).

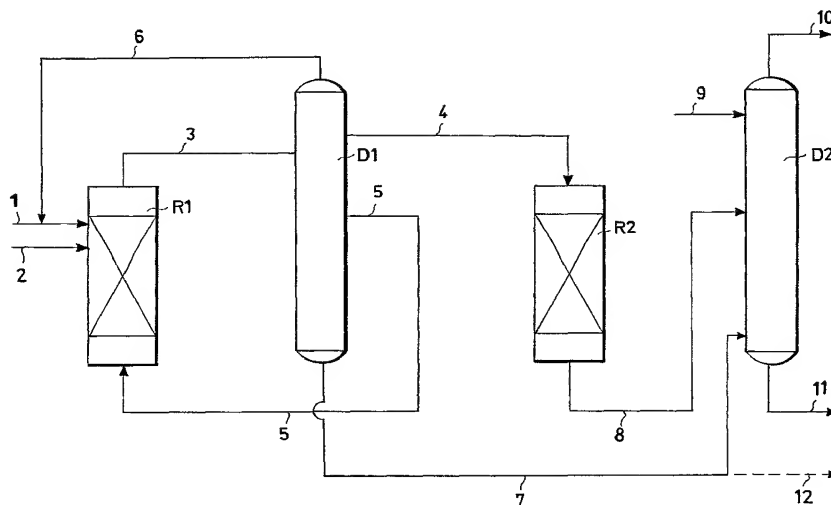
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: IMPROVED PROCESS FOR THE PRODUCTION AND PURIFICATION OF VINYL AROMATIC MONOMERS



(57) Abstract: Process for the production of vinyl aromatic monomers which comprises: a) feeding an aromatic stream and an olefinic stream to an alkylation unit; b) feeding the reaction product coming from the alkylation section to a first separation section; c) recovering the mono-alkylated aromatic hydrocarbon and the heavy bottom product from the first separation section; d) feeding the mono-alkylated aromatic to a dehydrogenation section; e) feeding the reaction product coming from the dehydrogenation section to a second purification/separation section; f) also feeding the heavy bottom product of step (c) to the second purification/separation section; g) recovering a stream consisting of the vinyl aromatic monomer with a purity higher than 99.7 by weight.

WO 2005/063659 A1



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.